

1. A method for determining the degree of cell death in a tissue, said method comprising the step of:

detecting the concentration of body fluid-soluble nuclear matrix protein, or fragments thereof, released from the cells of said tissue, said concentration being indicative of the degree of cell death in said tissue.

2. The method of claim 1 wherein said cell death occurs by apoptosis.
3. The method of claim 1 wherein said cell death occurs by necrosis.
4. The method of claim 1 wherein the concentration of said nuclear matrix protein is detected in a sample of body fluid.

5. The method of claim 1 for use in evaluating the status of a disease associated with cell death, said method comprising the additional steps of:
 - (a) repeating, at intervals, the step of detecting the concentration of body fluid-soluble nuclear matrix protein or fragments thereof; and
 - (b) comparing said detected concentrations, wherein changes in said detected concentrations are indicative of the status of the disease.
6. The method of claim 5 wherein the disease is a malignancy.
7. The method of claim 6 wherein the malignancy is a carcinoma, sarcoma, lymphoma or myeloma.
8. The method of claim 1 for use in evaluating the efficacy of a therapy, said method comprising the additional steps of:
 - (a) administering a therapeutic agent or procedure to a patient;
 - (b) repeating, at intervals, the step of detecting the concentration of body fluid-soluble nuclear matrix protein or fragments thereof; and

- (c) comparing said detected concentrations, wherein changes in said concentrations are indicative of the effect of the therapeutic agent or procedure.
- 9. The method of claim 8 wherein said therapy induces cell death.
 - 10. The method of claim 8 wherein said therapeutic agent or procedure is a cancer therapeutic agent or procedure.
 - 11. The method of claim 1 wherein the nuclear matrix protein is detected in a sample of body fluid selected from the group consisting of blood, serum, plasma, urine, semen, spinal fluid, ascitic fluid, peritoneal fluid, saliva, sputum, tissue swabs, and body exudates.
 - 12. The method of claim 11 wherein said body exudate is breast exudate.
 - 13. The method of claim 1 wherein the step of detecting comprises the steps of:
 - (a) exposing a sample comprising a said body fluid to antibodies specific for said nuclear matrix protein under conditions sufficient to allow specific binding of said antibodies to said protein or fragments thereof in said sample; and

- (b) measuring the amount of antibody-nuclear matrix protein complex formed by said specific binding, the amount being indicative of the concentration of body fluid-soluble nuclear matrix protein in said sample.
- 14. The method of claim 13 wherein said nuclear matrix protein-specific antibodies are monoclonal antibodies.
 - 15. The method of claim 13 wherein said nuclear matrix protein-specific antibodies are obtained by:
 - (a) selectively obtaining nuclear matrix proteins from cells; and
 - (b) raising antibodies to said nuclear matrix proteins.
 - 16. The method of claim 15 wherein said antibodies raised in step b comprise a polyclonal sera.
 - 17. The method of claim 15 wherein said antibodies raised in step b comprise monoclonal antibodies to selected nuclear matrix proteins of step a.

18. A method for inducing release of body-fluid-soluble nuclear matrix protein from cells, the method comprising the steps of:
 - (a) exposing a cell sample in a liquid medium to a compound which induces release of interior nuclear matrix protein; and
 - (b) detecting a nuclear matrix protein or a fragment thereof in said liquid medium released from the cells in said sample.
19. The method of claim 18 wherein said compound is a cytokine.
20. The method of claim 19 wherein said compound is tumor necrosis factor.
21. A method for evaluating the cytotoxicity of a compound, the method comprising the steps of:
 - (a) exposing a cell sample to a compound to be tested;
 - (b) detecting the concentration of soluble nuclear matrix protein or a fragment thereof released from cells in said sample; and

- (c) comparing the detected concentration to the concentration of soluble nuclear matrix protein released from cells in the absence of said compound.
22. A method for detecting the release of soluble nuclear matrix protein or a soluble fragment thereof from cells, the method comprising the step of:
- (a) obtaining a sample of the liquid medium surrounding cells,
 - (b) detecting the presence of soluble nuclear matrix protein, or fragments thereof, in said medium, released from said cells.
23. Isolated body fluid soluble nuclear matrix protein isolated by a method comprising steps of:
- (a) exposing cells to an agent capable of inducing release of body fluid soluble nuclear protein,
 - (b) collecting a sample of the liquid medium surrounding said cells,
 - (c) selectively extracting the body fluid soluble nuclear matrix proteins present in said liquid.

24. The method of claim 1, 21 or 22 wherein said nuclear matrix proteins are characteristic of said cells.